SEQUENCE LISTING

<110> Weinburg, Aaron

<120> COMPOSITIONS AND METHODS FOR TREATING
HIV INFECTIONS

<130> CWRU-P01-019

<140> 10/737,288
<141> 2003-12-15

<150> 60/433,099
<151> 2002-12-13

<160> 21

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 41
<212> PRT
<213> Homo sapiens

<400> 1
Gly Ile Gly Asp Pro Val Thr Cys Leu Lys Ser Gly Ala Ile Cys His
1 5 10 15
Pro Val Phe Cys Pro Arg Arg Tyr Lys Gln Ile Gly Thr Cys Gly Leu
20 25 30
Pro Gly Thr Lys Cys Cys Lys Lys Pro
35 40

<210> 2
<211> 64
<212> PRT
<213> Homo sapiens

<400> 2
Met Arg Val Leu Tyr Leu Leu Phe Ser Phe Leu Phe Ile Phe Leu Met
1 5 10 15
Pro Leu Pro Gly Val Phe Gly Gly Ile Gly Asp Pro Val Thr Cys Leu
20 25 30
Lys Ser Gly Ala Ile Cys His Pro Val Phe Cys Pro Arg Arg Tyr Lys
35 40 45
Gln Ile Gly Thr Cys Gly Leu Pro Gly Thr Lys Cys Cys Lys Lys Pro
50 55 60

<210> 3
<211> 121
<212> PRT
<213> Fusobacterium nucleatum

<400> 3
Met Ser Leu Phe Leu Val Ala Cys Gly Glu Lys Lys Glu Glu Glu Lys
1 5 10 15

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Pro Ala Glu Gln Ala Ala Val Glu Ala Thr Ala Thr Glu Ala Pro Ala
            20                  25                  30
Thr Glu Thr Thr Glu Ala Ala Ala Glu Ala Lys Thr Phe Ser Leu Lys
        35                  40                  45
Thr Glu Asp Gly Lys Glu Phe Thr Leu Val Val Ala Ala Asp Gly Ser
    50                  55                  60
Thr Ala Thr Leu Thr Asp Ala Glu Gly Lys Ala Thr Glu Leu Lys Asn
65                  70                  75                  80
Ala Glu Thr Ala Ser Gly Glu Arg Tyr Ala Asp Glu Ala Gly Asn Glu
                85                  90                  95
Val Ala Met Lys Gly Ala Glu Gly Ile Leu Thr Leu Gly Asp Leu Lys
            100                 105                 110
Glu Val Pro Val Thr Val Glu Ala Lys
        115                 120
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<210> 4
<211> 2045
<212> DNA
<213> Homo sapiens

<400> 4
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catcagccat gagggtcttg tatctcctct tctcgttcct cttcatattc ctgatgcctc 120
ttccaggtga gatgggccag ggaaatagga gggttggcca aatggaagaa tggcgtagaa 180
gttctctgtc tcctctcatt cccctccacc tatctctccc tcatccctct ctctccttcc 240
tctctctgtg tgtcccctcc atccttttct cctgcttctc tctcttcttc cctctctctc 300
ttttttctgt ctttcttttt cctctctccc tagagcatgt ctttctttct ttctctttcc 360
tttcttctac ccacactttt agactgaatg ccctatttaa ttgaacaaag cattgcttcc 420
ttcaatagaa aaggagtttg agaacccaat ggacacctca ctcgttcttc taagccaata 480
tgaaggagcc cagtagcttg taaatatcat ctcttcactg ctttccatgc tacaactgct 540
gagactatgg ttgaaacctg ttaggtgact ttttaaataa aaggcagaaa ttttgatttt 600
atctaaagaa agtagtatag aatgtcattt tctaaatttt tatatttaaa gggtagatac 660
tgcaacctag agaattccag ataatcttaa ggcccagcct atactgtgag aactactgca 720
gcaagacact ctgcctccag gacttttctg atcagaggcc ctgagaacag tccctgccac 780
taggccactg caggttcaca ggacagggta cagcccattg aaacctactt ttaaacctgg 840
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aaaagaggga gagtggaagg gaaggatgga gaaagggaaa aagaaaattt gagagtaaat 960
cctaaaacaa ttaatctaat agatatcatc ttgtgaaatc ctcattttac caatcttatt 1020
tatgagtcct gggttttgtg agaacaatgg ggttctgaga ggcaccagag acctcatgtt 1080
ttccaaaacc tagaacagta taatgaagga aggcggggag gcagggaggc agggaggcag 1140
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ggagggaggg agggataaaa aaagaagaat gaggttgaaa ccaggactta gatattagaa 1260
acaagccatt acaaaattta tttctatggt taattgtggt tttcaactgt aagttacttg 1320
gtgttaattt cctattaaac aatttcagta agttgcatct ttttatccca tctcaggtca 1380
aatacttaac agactaaatg atttgaaaaa gcaaaagttt actggcttgt gtgtgttaaa 1440
atggaggtat ggtggctttg atattatctt cttgtggtgg agctgaattc acaagagatc 1500
gttgctgagc tcctaccaga ccccacctgg aggccccagt cactcaggag agatcagggt 1560
ctttcacaat caggttctac aaaaataaac atccccccaa ccacagcagt gccagtttcc 1620
atgtcagaaa cttagatcca aatgactgac tcgcgtctca ttatcatgat ggaaaagccc 1680
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tgtcatccag tcttttgccc tagaaggtat aaacaaattg gcacctgtgg tctccctgga 1920
acaaaatgct gcaaaaagcc atgaggaggc caagaagctg ctgtggctga tgcggattca 1980
gaaagggctc cctcatcaga gacgtgcgac atgtaaacca aattaaacta tggtgtccaa 2040
agata   2045

<210> 5

<211> 319
<212> DNA
<213> Homo sapiens

<400> 5
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tattcctgat gcctcttcca ggtgtttttg gtggtatagg cgatcctgtt acctgcctta 120
agagtggagc catatgtcat ccagtctttt gccctagaag gtataaacaa attggcacct 180
gtggtctccc tggaacaaaa tgctgcaaaa agccatgagg aggccaagaa gctgctgtgg 240
ctgatgcgga ttcagaaagg gctccctcat cagagacgtg cgacatgtaa accaaattaa 300
actatggtgt ccaaagata 319

<210> 6
<211> 195
<212> DNA
<213> Homo sapiens

<400> 6
atgagggtct tgtatctcct cttctcgttc ctcttcatat tcctgatgcc tcttccaggt 60
gtttttggtg gtataggcga tcctgttacc tgccttaaga gtggagccat atgtcatcca 120
gtcttttgcc ctagaaggta taaacaaatt ggcacctgtg gtctccctgg aacaaaatgc 180
tgcaaaaagc catga 195

<210> 7
<211> 126
<212> DNA
<213> Homo sapiens

<400> 7
ggtataggcg atcctgttac ctgccttaag agtggagcca tatgtcatcc agtcttttgc 60
cctagaaggt ataaacaaat tggcacctgt ggtctccctg gaacaaaatg ctgcaaaaag 120
ccatga 126

<210> 8
<211> 366
<212> DNA
<213> Homo sapiens

<400> 8
atgagtttat tcttagtagc ttgtggagaa aaaaaagaag aagaaaaacc agctgaacaa 60
gctgctgtag aagcaactgc aactgaagca cctgctacag aaacaactga agctgctgct 120
gaagctaaaa cattctcact taaaactgaa gatggaaaag aattcacatt agtagttgct 180
gctgatggaa gtactgcaac tttaactgat gcagaaggaa aagcaactga attaaaaaat 240
gctgaaactg catctggaga aagatatgca gatgaagctg gaaacgaagt tgctatgaaa 300
ggtgcagaag gaatcttaac tttaggagac cttaaagaag taccagtaac tgttgaagct 360
aaatag 366

<210> 9
<211> 129
<212> PRT
<213> Fusobacterium nucleatum

<400> 9
Met Lys Lys Ile Leu Leu Leu Leu Ser Ser Leu Phe Leu Phe Ala Cys
 1   5   10   15
Ala Asn Ile Asp Thr Gly Val Asp Glu Ser Lys Glu Ala Gln Ile Ser
            20   25   30
Arg Leu Leu Lys Glu Ala Asp Lys Lys Lys Glu Lys Thr Val Glu Val
        35   40   45

```
Glu Lys Lys Leu Val Thr Asp Asn Gly Glu Glu Val Ile Glu Glu Glu
    50                  55                  60
Ala Thr Val Gln Asn Lys Lys Ser His Lys Gly Met Thr Arg Gly Glu
65                  70                  75                  80
Ile Met Glu Tyr Glu Met Thr Arg Val Ser Asp Glu Met Asn Ala Leu
                85                  90                  95
Gln Ala Asp Val Gln Gln Tyr Gln Glu Lys Lys Ala Gln Leu Lys Ala
            100                 105                 110
Tyr Gln Glu Lys Leu Gln Lys Leu Glu Glu Leu Asn Asn Ala Gly Ile
        115                 120                 125
Lys
```

<210> 10
<211> 390
<212> DNA
<213> Fusobacterium nucleatum

<400> 10
ttgaaaaaaa tattattact attatcttct ttatttttat ttgcttgtgc taatatagat 60
acaggtgtag atgaaagtaa agaagctcaa atatcaagac ttttaaaaga agctgataag 120
aaaaaagaaa aaacagtaga agtagaaaag aaacttgtaa ctgataatgg agaggaagtt 180
atagaggaag aagctaccgt tcaaaacaaa aaatcacata aaggaatgac aagaggggaa 240
ataatggaat atgaaatgac aagagtttca gatgaaatga atgccctaca agcggatgta 300
caacaatatc aagaaaagaa agcacaacta aaagcatacc aagaaaaatt acaaaaatta 360
gaagaattaa ataatgcagg aataaaataa 390

<210> 11
<211> 123
<212> PRT
<213> Fusobacterium nucleatum

<400> 11
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Met Lys Lys Val Ile Leu Thr Leu Phe Val Leu Leu Ser Ile Gly Ile
 1               5                  10                  15
Phe Ala Asn Asp Glu Ile Ile Ser Glu Leu Lys Gly Leu Asn Ala Glu
            20                  25                  30
Tyr Glu Asn Leu Val Lys Glu Glu Glu Ala Arg Phe Gln Lys Glu Lys
        35                  40                  45
Glu Leu Ser Glu Arg Ala Ala Ala Gln Asn Val Lys Leu Ala Glu Leu
    50                  55                  60
Lys Ala Ser Ile Glu Glu Lys Leu Leu Ala Ala Pro Glu Glu Arg Lys
65                  70                  75                  80
Thr Lys Phe Phe Lys Asp Thr Phe Asp Gly Leu Val Lys Asp Tyr Ser
                85                  90                  95
Lys Tyr Leu Ser Gln Ile Asn Glu Lys Ile Ala Glu Asn Thr Glu Ile
            100                 105                 110
Val Ser Asn Phe Glu Lys Ile Gln Lys Ile Arg
        115                 120
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<210> 12
<211> 372
<212> DNA
<213> Fusobacterium nucleatum

<400> 12
atgaaaaaag ttattttaac attatttgtt ttattatcta ttggaatatt tgcaaatgat 60

gagattattt cagagttaaa aggacttaat gctgagtatg aaaatttagt aaaagaagaa 120
gaagctagat ttcaaaaaga aaaagaactt tctgaaagag cagcagctca aaatgttaaa 180
ttggctgaat taaaagcaag cattgaagaa aaattgttag cagctccaga agaaagaaaa 240
acaaaatttt ttaaagatac ttttgatggt ttagtgaaag attattcaaa atatttaagt 300
caaataaatg aaaaaatagc tgaaaatact gaaatagtaa gtaattttga aaaaattcaa 360
aaaataagat ag 372

<210> 13
<211> 129
<212> PRT
<213> Fusobacterium nucleatum

<400> 13
Met Lys Lys Phe Leu Leu Leu Ala Val Leu Ala Val Ser Ala Ser Ala
1 5 10 15
Phe Ala Ala Asn Asp Ala Ala Ser Leu Val Gly Glu Leu Gln Ala Leu
20 25 30
Asp Ala Glu Tyr Gln Asn Leu Ala Asn Gln Glu Glu Ala Arg Phe Asn
35 40 45
Glu Glu Arg Ala Gln Ala Asp Ala Ala Arg Gln Ala Leu Ala Gln Asn
50 55 60
Glu Gln Val Tyr Asn Glu Leu Ser Gln Arg Ala Gln Arg Leu Gln Ala
65 70 75 80
Glu Ala Asn Thr Arg Phe Tyr Lys Ser Gln Tyr Gln Asp Leu Ala Ser
85 90 95
Lys Tyr Glu Asp Ala Leu Lys Lys Leu Glu Ser Glu Met Glu Gln Gln
100 105 110
Lys Ala Ile Ile Ser Asp Phe Glu Lys Ile Gln Ala Leu Arg Ala Gly
115 120 125
Asn

<210> 14
<211> 390
<212> DNA
<213> Fusobacterium nucleatum

<400> 14
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gatgcagcaa gtttagtagg tgaattacaa gcattagatg ctgaatacca aaacttagca 120
aatcaagaag aagcaagatt caatgaagaa agagcacaag ctgacgctgc tagacaagca 180
ctagcacaaa atgaacaagt ttacaatgaa ttatctcaaa gagctcaaag acttcaagct 240
gaagctaaca caagatttta taaatctcaa taccaagatc tagcttctaa atatgaagac 300
gctttaaaga aattagaatc tgaaatggaa caacaaaaag ctattatttc tgattttgaa 360
aaaattcaag ctttaagagc tggtaactaa 390

<210> 15
<211> 67
<212> PRT
<213> Homo sapiens

<400> 15
Met Arg Ile His Tyr Leu Leu Phe Ala Leu Leu Phe Leu Phe Leu Val
1 5 10 15
Pro Val Pro Gly His Gly Gly Ile Ile Asn Thr Leu Gln Lys Tyr Tyr
20 25 30
Cys Arg Val Arg Gly Gly Arg Cys Ala Val Leu Ser Cys Leu Pro Lys
35 40 45

```
Glu Glu Gln Ile Gly Lys Cys Ser Thr Arg Gly Arg Lys Cys Cys Arg
    50                  55                  60
Arg Lys Lys
65
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<210> 16
<211> 204
<212> DNA
<213> Homo sapiens

<400> 16
atgaggatcc attatcttct gtttgctttg ctcttcctgt ttttggtgcc tgttccaggt 60
catggaggaa tcataaacac attacagaaa tattattgca gagtcagagg cggccggtgt 120
gctgtgctca gctgccttcc aaaggaggaa cagatcggca agtgctcgac gcgtggccga 180
aaatgctgcc gaagaaagaa ataa 204

<210> 17
<211> 337
<212> DNA
<213> Homo sapiens

<400> 17
tgagtctcag cgtggggtga agcctagcag ctatgaggat ccattatctt ctgtttgctt 60
tgctcttcct gtttttggtg cctgtcccag gtcatggagg aatcataaac acattacaga 120
aatattattg cagagtcaga ggcggccggt gtgctgtgct cagctgcctt ccaaaggagg 180
aacagatcgg caagtgctcg acgcgtggcc gaaaatgctg ccgaagaaag aaataaaaac 240
cctgaaacat gacgagagtg ttgtaaagtg tggaaatgcc ttcttaaagt ttataaaagt 300
aaaatcaaat tacatttttt tttcaaaaaa aaaaaaa 337

<210> 18
<211> 266
<212> DNA
<213> Homo sapiens

<400> 18
catccagtct cagcgtgggg tgaagcctag cagctatgag gatccattat cttctgtttg 60
ctttgctctt cctgtttttg gtgcctgttc caggtcatgg aggaatcata aacacattac 120
agaaatatta ttgcagagtc agaggcggcc ggtgtgctgt gctcagctgc cttccaaagg 180
aggaacagat cggcaagtgc tcgacgcgtg gccgaaaatg ctgccgaaga aagaaataaa 240
aaccctgaaa catgacgaga gtgttg 266

<210> 19
<211> 82
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 81
<223> Xaa = Any Amino Acid

<400> 19
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Ser Leu Trp Asp Gln Ser Leu Lys Pro Cys Val Lys Leu Thr Pro Leu
 1               5                  10                  15
Cys Val Thr Leu Asn Cys Arg Asp Val Asn Ala Thr Asn Thr Gly Asn
            20                  25                  30
Val Thr Tyr Asn Asp Thr Ile Lys Gly Glu Ile Lys Asn Cys Ser Phe
        35                  40                  45
```

```
Asn Thr Thr Thr Glu Ile Arg Asp Lys Lys Gln Thr Ala Tyr Ala Leu
    50                  55                  60
Phe Tyr Lys Leu Asp Ile Val Pro Leu Asn Asp Gly Asn Asn Asn Asn
65                  70                  75                  80
Xaa Tyr
```

<210> 20
<211> 64
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 21,23,36
<223> Xaa = Any Amino Acid

<400> 20

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Ser Leu Trp Asp Gln Ser Leu Lys Pro Cys Val Lys Leu Thr Pro Leu
 1               5                  10                  15
Cys Val Thr Leu Xaa Cys Xaa Asn Ala Thr Phe Asn Asn Ile Thr Thr
            20                  25                  30
Phe Asn Ile Xaa Asn Ser Ser Ser Asn Ile Thr Thr Tyr Pro Ile Asn
        35                  40                  45
Asn Thr Thr Asn Gln His Ser Leu Phe Tyr Asn Leu His Val Leu Pro
    50                  55                  60
```

<210> 21
<211> 101
<212> PRT
<213> Homo sapiens

<400> 21

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Ser Leu Trp Asp Gln Ser Leu Lys Pro Cys Val Lys Leu Thr Pro Leu
 1               5                  10                  15
Cys Val Thr Leu Lys Cys Glu Asn Ala Thr Ile Asn Asn Gly Gly Asn
            20                  25                  30
Ala Thr Val Ala Ser Asn Asp Thr Ile Asn Arg Glu Val Lys Asn Cys
        35                  40                  45
Ser Phe Asn Ile Thr Thr Asp Leu Arg Asp Lys Arg Lys His Glu Tyr
    50                  55                  60
Ala Leu Phe Tyr Thr Leu Asp Ile Val Pro Leu Asn Glu Lys Lys Asn
65                  70                  75                  80
Asn Ala Ser Glu Tyr Arg Leu Ile Ser Cys Asn Thr Ser Ala Val Thr
                85                  90                  95
Gln Ala Cys Pro Lys
            100
```